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Coordination of the Fourth International Symposium on Gas Transfer at Water Surfaces, June 5-8, 2000

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<http://cheyenne.rsmas.miami.edu/gas2000.html>

LONG-TERM GOALS

The long term goals of the project are to advance the understanding of the physical and chemical mechanisms associated with gas transfer at water surfaces.

OBJECTIVES

The objectives of the project are to organize an international symposium on Gas Transfer at Water Surfaces, and to publish a volume summarizing the current state of the art in the field.

APPROACH

Symposia dedicated to gas transfer across water surfaces were previously held at Cornell University in 1983, (Brutsaert and Jirka 1984), in Minneapolis in 1990 (Wilhelms and Gulliver 1991), and at the University of Heidelberg, in 1995 (Jähne and Monahan 1995). The meetings were very successful, and the conference proceedings have served as important references for anyone interested in learning the latest developments in the study of air-sea gas exchange. During the five years since the third symposium was held, there have been many advances in the field, along with increased recognition of the importance of air-sea gas exchange for several processes of general societal impact. Consequently, it was thought to be an appropriate time for a further symposium on gas transfer at water surfaces to be convened.

WORK COMPLETED

The Fourth International Symposium on Gas Transfer at Water Surfaces was held at the Eden Roc Resort and Spa, Miami Beach, FL, on 5-8 June 2000. The symposium was attended by 120 scientists

and students from 15 countries. During the four days of the meeting, 72 oral presentations and 38 posters were presented. A full list of presentations is available on the conference web site, <http://cheyenne.rsmas.miami.edu/gas2000.html>. Sessions were held on the following topics: field measurements, laboratory measurements, remote sensing, physical mechanisms, aeration and measurement techniques, biogeochemical cycles, breaking waves and bubble mediated gas transfer.

RESULTS

The organizers have entered into an agreement with the American Geophysical Union (AGU) to publish the results from the symposium as a volume in the geophysical monograph series. Seventy-six manuscripts were submitted by symposium attendees for inclusion in the volume, and these were sent for peer review following AGU journal guidelines. Fifty-seven papers were selected for inclusion in the volume. The volume, entitled Gas Transfer at Water Surfaces, edited by M.A. Donelan, W.M. Drennan, E.S. Saltzman and R. Wanninkhof, is scheduled for publication by AGU during spring 2001.

IMPACT/APPLICATIONS

TRANSITIONS

RELATED PROJECTS

Support for the symposium was also received from the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, the National Science Foundation, the Rosenstiel School of Marine and Atmospheric Science and the Scientific Committee for Oceanic Research.

REFERENCES

Brutsaert, W., and G.H. Jirka, 1984: Gas transfer at the water surface, Reidel, Hingham MA, 639 pp.

Jähne, B., and E.C. Monahan, 1995: Air-water gas transfer. Aeon-Verlag, Hanau, Germany, 900 pp.

Wilhelms, S.C., and J.S. Gulliver, 1991: Proceedings of the Second International Symposium on Gas Transfer at Water Surfaces. ASCE, New York, 797 pp.